

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

The claims have been amended to delete the recitation that the wire wound under tension around the outer periphery of the cylindrical body is a “piano” wire. The patentability of the allowed Claims 4, 5 and 10-15 is not believed to have been affected thereby. Claim 1 has been further amended to recite that the cooling water flow paths extend from one end side to an opposite end side of the inner cylinder. Basis for this is found in Fig. 3.

The specification describes a “prior art 1” which is U.S. patent 3,900,189 (Elmgren et al.). This prior art discloses an HIP apparatus in which cooling channels are formed around a high pressure vessel 30 using beveled rods 33 and a surrounding metal tube 36. The metal tube 36 is in turn covered by a wound strip sheath 31. Inlet and outlet channels 45-46 for the coolant are defined in end rings 40 provided at the axial ends of the wound sheath 31.

As is evident from Figure 2 of the reference, however, the channels 33 do not extend from one end of the pressure vessel 30 to the other end, but only extend as far as the annular spaces 45. This makes it difficult to adequately cool the sealing rings 43 and the unillustrated sealing rings provided in the upper and lower lid members of the HIP apparatus.

According to a feature of the invention set forth in Claims 1-9, on the other hand, the cooling water flow paths extend from one end side to the opposite end side of the inner cylinder of the cylindrical body. For example, referring to the non-limiting embodiment shown in the figures, particularly at Figures 2 and 3, the cooling water flow paths 9 formed between the adjacent spacers 6 extend entirely to the end of the inner cylindrical body 2a, thereby enhancing the ability of the cooling water to cool the sealing elements such as seal 4a.

On the other hand, Claims 1-3 and 6-9 stand rejected under 35 U.S.C. § 102 as being anticipated by Elmgren et al. However, this rejection is respectfully traversed for the reasons noted above. Specifically, Claim 1 recites that the water flow paths “are formed each between adjacent said spacers, said cooling water flow paths extending from one end side to an opposite end side of said inner cylinder. In contrast, the cooling water flow paths 39 of Elmgren et al. do not extend from one end side to the opposite end side of the inner cylinder 30, but instead terminate at the annular spaces 45. Amended Claim 1 is therefore believed to clearly define over this reference.

Allowable Claim 5 has been rewritten in independent form, except that it does not recite that the wire is “piano wire.” This is not believed to detract from the allowability of Claim 5 since Claim 5 nonetheless recites a clamp member fitted in each of outer grooves of the spacers and having a thickness not larger than the depth of the outer groove. An exemplary embodiment of the clamp members is shown at 6a in Figure 3. No such clamp members are taught or suggested in Elmgren et al.

Claim 4 has also been rewritten in independent form, except that it does not recite “piano wire” and does not include the subject matter of the intervening Claim 2. Applicants also believe that this does not detract from the allowability of Claim 4, for the reasons set forth above.

Claim 8 has also been rewritten in independent form. Claim 8 recites the further feature whereby leakage water guide paths are formed transversely outward of each spacer piece to guide leakage water toward an end portion of the cylinder body, together with leakage water detecting means in the leakage water guide paths. For example, referring to the non-limiting embodiment of Figures 7A-7B, a cooling water detecting path may be formed by an upper surface of the cooling water supply header 8 and the outer detecting groove 2e (see paragraph bridging pages 23-24). The leaking water detecting means is

exemplified by an inner detecting groove 2f and a leakage water detecting part 10a (middle paragraph of page 24). No comparable or equivalent structure is present in Elmgren et al.

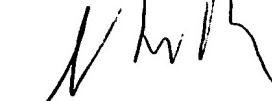
The Examiner has stated that Elmgren et al. discloses "means for prevention of water leakage from the system," described at line 41 of column 3 to line 8 of column 4. However, this portion of Elmgren et al. merely describes that the sealing ring 43 prevents cooling medium from penetrating between the tube 30 and the rings 40. It provides no description of leakage water guide paths formed transversely outward from each of the spacer pieces, or of leakage water detecting means equivalent to the structure disclosed in the specification. In this regard, it is noted that the transverse channels 45 and 46 cannot comprise the claimed leakage water guide paths since they comprise the main water flow guide paths – not guide paths for leakage of water. Claim 8 is therefore also believed to define over Elmgren et al.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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